MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 2, 2018/2019

MVR2033 – SIMULATION TECHNOLOGY

(All sections / Groups)

08 MARCH 2019
9.00 AM - 11.00 AM
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This Question paper consists of 3 pages with 7 questions only.

2. Answer **ONLY FIVE** out of SEVEN questions. All questions carry equal marks and the distribution of the marks for each question is given.

3. Please write all your answers in the Answer Booklet provided.

Total marks are 100 | Answer only 5 questions

QUESTION 1

A. What is Body-Referenced Haptic device? **[5 Marks]**

B. What is the benefit of Body-Referenced Haptic device? **[5 Marks]**

C. There are 2 types of Body-reference Haptic, mention them and explain. **[10 Marks]**

QUESTION 2

A. There are several areas of human factors research and they are classified into 4 studies, what are they and give explanation? **[10 Marks]**

B. What is the three I3 in Virtual Reality that is mentioned by Burdea (2003)? Explain them. **[10 Marks]**

QUESTION 3

A. Cybersickness is one of the obvious troublesome effects of Virtual Reality simulation on users. Define the term "Cybersickness" **[5 Marks]**

B. Mention any four of the main symptoms of "Cybersickness". **[10 Marks]**

C. What is the importance of user safety studies on Virtual Reality? **[5 Marks]**

QUESTION 4

A. What are the system characteristics that influence the user to have Cybersickness? (One of them is Poor resolution, mention 4 others) **[10 Marks]**

B. Please mention 4 information of Virtual Retinal Display (VRD) **[8 Marks]**

C. What kind of people will be really helped by this VRD according to the research of Kleweno, Seibel, Viirre, Kelly, & Furness in 2001? **[2 Marks]**

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QUESTION 5

A. What are the techniques to increase the engagement in games? And how to achieve that? **[10 Marks]**

B. Please mention 4 characteristics of the Educational Simulations (which is part of Immersive Learning Simulation)? **[10 Marks]**

QUESTION 6

A. Pedagogical / didactic generally surrounds a learning experience, ensuring that participants spend their time productively. Mention 5 of the pedagogical techniques beside the Replay option and the Bread Crumbs (indicators of where a participant has already been) **[10 Marks]**

B. Explain how does the HTC Vive tracking sensor know the user's position in the movement area? **[10 Marks]**

QUESTION 7

A. Can 3D Interaction only be done by the 3D input devices? Explain why? **[10 Marks]**

B. Mention 5 items of 3D input devices **[10 Marks]**

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